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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PHILLIPS, HASSAN A

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/781,928

Examiner

Hassan Phillips

Applicant(s)

PELLEGRINO ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statement (IDS), filed May 29, 2001, has been received and considered by the Examiner.

Drawings

1. The Formal Drawings filed February 1, 2002, have been received and considered by the Examiner.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: "definable remote interface module 21", on page 5, 2nd paragraph. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are further objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference numeral 11, in Fig. 1. Corrected drawing sheets, or amendment to the specification to add the reference character(s) in the description, are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

1. The disclosure is objected to because of the following informalities: The reference numeral used to describe the "get_LastDeviceDetectionTime" function on page 10, 2nd paragraph, should be 681, instead of 682. Appropriate correction is required.

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is

requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

1. Claim 1 is objected to because of the following minor informalities: The word "manufacturor", in the last two lines of claim 1, is spelled wrong. The correct spelling for the word is "manufacturer". Appropriate correction is required.

2. Claim 3 is objected to because of the following informalities: The Examiner is not familiar with the word "synchonomous". The examiner suggests that the Applicant point out where this word is defined in the application, or correct the spelling of the word if it has been misspelled. Appropriate correction is required. In order for the Examiner to advance prosecution of the application for patent, the Examiner has ignored the word in consideration of the claimed invention.

3. Claim 16 is objected to because of the following minor informalities: The word "usuable", in the 8th line of claim 16, is spelled wrong. The correct spelling for the word is "usable". Appropriate correction is required.

4. Claim 20 is objected to because of the following informalities: The Examiner is not familiar with the word "hardcast". The examiner suggests that the Applicant point out where this word is defined in the application, or correct the spelling of the word if it

has been misspelled. Appropriate correction is required. In order for the Examiner to advance prosecution of the application for patent, the Examiner has ignored the word in consideration of the claimed invention.

5. Claim 21 is objected to because of the following minor informalities: The acronym "COM", should first be defined in the claim in order to better understand the claimed invention. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, are rejected under 35 U.S.C. 103(a) as being unpatentable over Wewalaarachchi et al. (hereinafter We.), U.S. patent 6,571,140, in view of Drott et al., (hereinafter Drott), U.S. patent 6,170,025, and further in view of Applicants Admitted Prior Art (AAPA).

3. In considering claim 1, We. teaches a method for implementing an application programming interface through a client, comprising the computer implemented steps of:

- a) Detecting a physical network class and returning an object to a client represented by a pointer to the physical network, (col. 4, lines 28-51);
- b) Making the client an active member of the physical network, (col. 5, lines 24-29);
- c) Detecting all devices active on the physical network, (col. 4, lines 52-65);
- d) Providing a database of manufacturer devices to establish a syntax giving meaning to data values transmitted to and received from devices, (col. 4, lines 38-51).

Although the disclosed method of We. shows substantial features of the claimed inventions, it fails to explicitly show:

- a) Broadcasting a message from the client over the physical network as part of detecting all devices active on the physical network.

Nevertheless, in a similar field of endeavor Drottar teaches a distributed computer system comprising:

- a) Broadcasting a message from a client over a physical network as part of detecting all devices active on the physical network, (col. 22, lines 21-28).

Given the teachings of the Drottar, it would have been obvious to one of ordinary skill in the art to modify the teachings of We. to have the client broadcast a raw message over the physical network as part of detecting all devices active on the physical network. This would have provided the client with the flexibility for determining which devices are active on the network whenever a client broadcasts such a request, and this would have also provided the client with important data received by the client

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as a result of the broadcasts (i.e. network addresses, vendor ID's etc.), Drottar, col. 22, lines 28-43.

Although the disclosed method of We. in view of Drottar shows substantial features of the claimed inventions, they fail to explicitly show:

- a) The network class being a vehicle network class.

Nevertheless, vehicle network classes were well known in the art at the time of the present invention. The applicant admits this in the disclosure on page 2, 4th paragraph.

Thus given the teachings of the AAPA, it would have been obvious to one of ordinary skill in the art to modify the teachings of We. to show the network class being a vehicle network class. This would have shown that the teachings of We. provide a means for implementing an application programming interface through a client, comprising the computer implemented steps of (a- d), for all classes of networks including vehicle network classes, We., col. 4, lines 19-27, and col. 16, lines 41-59.

4. In considering claim 2, We. teaches providing a set of traffic managers 210, 220, allowing detection of and filtering of network messages. See col. 11, lines 58-67, col. 12, lines 1-13.

5. In considering claim 3, the method of We. further teaches:

- a) Responsive to a client request, transmitting a data request directed to a device on the physical network, (col. 4, lines 58-61);

- b) Obtaining values from devices indicating changes in state, (col. 9, lines 1-11);
- c) Responsive to a client request, periodically sending specified values to a device, (col. 15, lines 44-54).

6. In considering claim 4, the method of We. further teaches:

- a) Enumerating all physical devices previously detected on the physical network, (col. 4, lines 52-55);
- b) Responsive to client specified filtering criteria, obtaining network messages corresponding to the filtering criteria, (col. 11, lines 58-67, col. 12, lines 1-3).

7. Claims 5-12, 16, 17, 20, are rejected under 35 U.S.C. 103(a) as being unpatentable over We. in view of AAPA.

8. In considering claim 5, We. teaches a computer implemented translation system between a client and remote devices connected to a data network, the system comprising:

- a) A plurality of software objects, (col. 4, lines 28-35), including:
- b) A network interface incorporating a plurality of functions representing a model of a plurality of physical networks, a data link interface responsive to client requests for acquiring a network instance corresponding to a

physical network from the network interface, and a remote device interface incorporating a plurality of functions representing a plurality model for physical devices callable through the network interface for handling messages moving between the client and the physical device, (col. 6, lines 65-67, col. 7, lines 1-31).

Although the disclosed method of We. shows substantial features of the claimed inventions, it fails to explicitly show:

- a) The physical devices installable on a vehicle.

Nevertheless, physical devices installable on a vehicle were well known in the art at the time of the present invention. The applicant admits this in the disclosure on page 1, 2nd paragraph.

Thus given the teachings of the AAPA, it would have been obvious to one of ordinary skill in the art to modify the teachings of We. to show the remote device interface represent a plurality model for physical devices installable on a vehicle, which is callable through the network interface for handling messages moving between the client and a physical device. This would have shown that the teachings of We. can also be incorporated into vehicle data networks, We., col. 4, lines 19-27 and col. 16, lines 41-59.

9. In considering claim 6, We. teaches a common programming interface supported by the data link interface. See col. 6, lines 65-67, col. 7, lines 1-12.

10. In considering claim 7, We. further teaches a device detection interface called from the network interface, which includes a function for indicating to the client that a remote device has been detected in response to a previously commenced device operation, and a detection completed function for indicating to the client that a device detection operation has been completed. See col. 4, lines 52-65.

11. In considering claim 8, We. further teaches a raw message traffic notification interface which issues a call to a client upon receipt of message traffic from the network. See col. 10, lines 18-25.

12. In considering claim 9, We. also teaches notifying a client of receipt of a data value when the client is registered for the data value. See col. 10, lines 18-25.

13. In considering claim 10, We. also teaches notifying a client of receipt of a change of state data value for a value associated with a remote device. See col. 9, lines 1-11.

14. In considering claim 11, We. also teaches relating to a client about status for changed data values. See col. 9, lines 1-11.

15. In considering claim 12, We. further teaches returning an instance of the network interface and providing a unique identification to the instance making the

network available to the client, and an enumeration function for determining all networks currently available to the client. See col. 9, lines 42-58.

16. In considering claim 16, We. teaches an application programming interface for a plurality of network types, comprising:

- a) A client, (col. 11, lines 5-12);
- b) A data link interface responsive to the client for acquiring and identifying a physical network, (col. 4, lines 38-51);
- c) A network interface responsive to a request from the data link interface for initiating a communication link between the physical network and the client, which includes identification of the devices connected to the physical network, (col. 4, lines 52-65);
- d) A remote device interface responsive to requests from the network interface for translating data values to and from formats usable by the client and the physical network, (col. 4, lines 44-51);
- e) A data traffic management facility monitoring the network interface, the remote device interface and the physical network to provide indication of message traffic, message identification and transmission, (col. 8, lines 16-20).

Although the disclosed method of We. shows substantial features of the claimed invention, it fails to explicitly show:

- a) The physical network being a vehicle network.

Nevertheless, vehicle networks were well known in the art at the time of the present invention. The applicant admits this in the disclosure on page 2, 4th paragraph.

Thus given the teachings of the AAPA, it would have been obvious to one of ordinary skill in the art to modify the teachings of We. to show the physical network being a vehicle network. This would have shown that the teachings of We. provide a means for implementing an application programming interface for a plurality of vehicle network types, comprising the steps of (a- e), for all classes of networks including vehicle network classes, We., col. 4, lines 19-27, and col. 16, lines 41-59.

17. In considering claim 17, the method of We. further teaches a network interface that provides a means for implementing a plurality of software functions including:

- a) A function for obtaining a class designation for a network, (col. 7, lines 4-7);
- b) A function for implementing a network specific connection between the client and the network in response to a request by the client including the class designation for the network, (col. 10, lines 59-67);
- c) A function detecting devices active on the network, (col. 9, lines 42-50).

18. In considering claim 20, We. further teaches an application programming interface comprising:

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- a) A host computer on which the application programming interface is installed, (col. 11, lines 5-12);
- b) A software module for determining the network, (col. 7, lines 4-7);
- c) A software module for registering the host computer as a client on the network, (col. 5, lines 24-29);
- d) A module for detecting all active devices attached to the network, (col. 9, lines 42-50);
- e) A software database including parameters for the detected devices accessible to the host computer, (col. 4, lines 38-51).

Although the disclosed method of We. shows substantial features of the claimed invention, it fails to explicitly show:

- a) The physical network being a vehicle network.

Nevertheless, vehicle networks were well known in the art at the time of the present invention. The applicant admits this in the disclosure on page 2, 4th paragraph.

Thus given the teachings of the AAPA, it would have been obvious to one of ordinary skill in the art to modify the teachings of We. to show the physical network being a vehicle network. This would have shown that the teachings of We. provide a means for implementing an application programming interface for a plurality of vehicle network types, comprising the steps of (a- e), for all classes of networks including vehicle network classes, We., col. 4, lines 19-27, and col. 16, lines 41-59.

19. Claims 13, 14, 18, 19, are rejected under 35 U.S.C. 103(a) as being unpatentable over We. in view of AAPA, and further in view of Ludtke et al. (hereinafter Ludtke), U.S. patent 6,233,611.

20. In considering claims 13 and 19, We. further teaches:

- a) A connection function for establishing communication with a physical network, represented by a network instance to the client, (col. 6, lines 65-67, col. 7, lines 1-12);
- b) A device detection function allowing the client to determine which physical devices are connected to a physical network represented by a network instance, and an enumerate devices function for returning a set of all physical devices detected on the physical network the last time the device detection function was called, and a function for returning the number of detected devices at the time of the last operation of the device detection function, (col. 9, lines 51-58);
- c) A function for obtaining a physical address, and an adaptor name for the physical network, (col. 9, lines 53-58);
- d) A function for obtaining a baud rate from the physical network, (col. 11, lines 51-67, col. 12, lines 1-3);
- e) A function for obtaining a network class from a defined set of possible network classes, (col. 7, lines 4-7);

- f) A raw message traffic register function responsive to client requests to obtain messages corresponding to filtering criteria specified by the client in the function, (col. 11, lines 58-67, col. 12, lines 1-13);
- g) A transmit raw message function responsive to client requests, (col. 7, lines 21-31).

Although the disclosed method of We. shows substantial features of the claimed inventions, it fails to explicitly show:

- a) Disconnecting a client, or unregistering a prior registration for message traffic.

Nevertheless, disconnecting, or unregistering prior registrations for message traffic were well known in the art at the time of the present invention. This is exemplified in a similar field of endeavor, where Ludtke discloses a media manager for controlling autonomous media devices within a network comprising:

- a) Unregistering a prior registration for raw message traffic, (col. 14, lines 40-61).

Given the teachings of Ludtke, it would have been obvious to one of ordinary skill in the art to modify the teachings of We. to show disconnecting a client from physical network, and unregistering a prior registration for raw message traffic. Doing so would have provided an efficient means for communicating with devices over a network by saving valuable resources such as memory when disconnecting from a physical network or unregistering prior registration messages when the client no longer has a

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need to be connected to the physical network, or receive raw message traffic from devices over the network, Ludtke, col. 2, lines 13-40.

21. In considering claims 14 and 18, the teachings of We. further provide a means for including:

- a) A data value receive register function responsive to a client request and a way of notifying a client that the requested data is being returned, and for making a synchronous request of a particular data value from a remote device, (col. 4, lines 58-65);
- b) A change of state data value receive register function responsive to user requests for obtaining a change in state status for a particular data value from a particular remote device, (col. 9, lines 1-11);
- c) A data value transmit function responsive to client requests for sending a particular data value to a particular remote device, (col. 10, lines 59-67);
- d) A registration function for periodic transmission of data values responsive to client requests to send a particular data value to a particular remote device on a periodic basis specified by the client, (col. 15, lines 44-54);
- e) A function for obtaining remote device addresses, function codes for a remote device which then serves as part of the remote devices name, and an electronic control unit instance for a remote device which then serves as part of the identification of the remoter device, (col. 9, lines 53-58).

Although the disclosed method of We. shows substantial features of the claimed inventions, it fails to explicitly show:

- a) Unregistering a registered request.

Nevertheless, unregistering registered requests were well known in the art at the time of the present invention. This is exemplified in a similar field of endeavor, where Ludtke discloses a media manager for controlling autonomous media devices within a network comprising:

- a) Unregistering a prior registration, (col. 14, lines 40-61).

Given the teachings of Ludtke, it would have been obvious to one of ordinary skill in the art to modify the teachings of We. to show unregistering a registered request such as a registered request for a change of state, or for periodic transmissions. Doing so would have provided an efficient means for communicating with devices over a network by saving valuable resources such as memory when unregistering a registered request when the client no longer has a need for the request, Ludtke, col. 2, lines 13-40.

22. Claim 15, is rejected under 35 U.S.C. 103(a) as being unpatentable over We. in view of AAPA, and further in view of Ludtke, and still further in view of Drottar.

23. In considering claim 15, although the disclosed method of We. in view of AAPA and Ludtke, shows substantial features of the claimed inventions, it fails to explicitly show:

- a) A function for obtaining device specific information.

Nevertheless, Drottar discloses a media manager for controlling autonomous media devices within a network comprising:

- a) Obtaining device specific information in reply to a client request, (col. 22, lines 21-39).

Given the teachings of Drottar, it would have been obvious to one of ordinary skill in the art to modify the teachings of We. and AAPA, and Ludtke to show a function for obtaining device specific information such as, an industry group for a remote device, a vehicle system instance code for a remote device, a vehicle system code for a remote device, and a manufacturer code for a remote device by which a database of remote device properties may be accessed for variables used in calls to the remote device. This would have provided the client with valuable data on an "as-needed" basis. This also would have allowed a map identifying the remote devices to be built for efficiently accessing the devices, Drottar, col. 22, lines 40-43.

24. Claim 21, is rejected under 35 U.S.C. 103(a) as being unpatentable over We. in view of Williams et al. (hereinafter Williams), The Component Object Model: A Technical Overview (supplied by Applicant), and further in view of AAPA.

25. In considering claim 21, We. teaches:

- a) A plurality of high level interfaces representing a common abstraction of networks with diverse types, (col. 4, lines 36-51);

- b) A software database accessible through the high level interfaces specifying meaning for values transmitted to and obtained from physical devices attached to a network, (col. 4, lines 44-51).

Although the disclosed method of We. shows substantial features of the claimed inventions, it fails to explicitly show:

- a) A plurality of Component Object Model (COM) functions completed by reference to the database.

Nevertheless, Williams discloses a technical overview of COM fundamentals, and the benefits they provide. See Williams, page 6.

Given the teachings of Williams, it would have been obvious to one of ordinary skill in the art to modify the teachings of We. to show a plurality of COM functions completed by reference to the database. This would have provided the client with an interface that would have increased abstraction in the programming environment, and allowed for handling data in a consistent manner on all classes of networks.

Although the disclosed method of We. and Williams shows substantial features of the claimed invention, they fail to explicitly show:

- a) The network being a vehicle network.

Nevertheless, vehicle networks were well known in the art at the time of the present invention. The applicant admits this in the disclosure on page 2, 4th paragraph.

Thus given the teachings of the AAPA, it would have been obvious to one of ordinary skill in the art to modify the teachings of We. to show the physical network being a vehicle network. This would have shown that the teachings of We. provide a

means for implementing an application programming interface for a plurality of vehicle network types, for all classes of networks including vehicle network classes, We., col. 4, lines 19-27, and col. 16, lines 41-59.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wewalaarachchi et al., U.S. Patent 6,571,140 discloses a programming interface for communication with disparate devices.

Drott et al., U.S. Patent 6,170,025 discloses broadcasting over a network to discover active devices.

Ludtke et al., U.S. Patent 6,233,611 discloses unregistering a registered application.

Williams et al., The Component Object Model: A Technical Overview. (supplied by applicant).

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hassan Phillips whose telephone number is (703) 305-8760. The examiner can normally be reached on M-F 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HP/
6/15/04



FRANTZ B. JEAN
PRIMARY EXAMINER